

Subject index for papers in Volume 35

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any. Communications are identified by (C).

Subject	Author	Page
<i>APL</i>		
Execution of automatically parallelized APL programs on RP3	Ching	767
<i>Artificial intelligence</i>		
Visualizing processes in neural networks	Wejchert	244
<i>Built-in self-test (BIST)</i>		
Enhanced self-test techniques for VLSI systems applied to the IBM Enterprise System/9000 Type 9121 processor	Sarma	390
<i>C programming language</i>		
The parallel C (pC) programming language	Canetti	727
<i>Caches</i>		
Design choices for the TOP-1 multiprocessor workstation	Shimizu	591
Operating system support for parallel programming on RP3	Bryant	617
<i>Communications</i>		
Monitoring the performance of commercial T1-rate transmission service	Irvin	805
<i>Compilers</i>		
Automatic partitioning of a program dependence graph into parallel tasks	Sarkar	779
Execution of automatically parallelized APL programs on RP3	Ching	767
The parallel C (pC) programming language	Canetti	727

<i>Computer architecture</i>		
Design and performance of the IBM Enterprise System/9000 Type 9121 Vector Facility	Slegel	367
IBM Enterprise System/9000 Type 9121 system controller and memory subsystem design	Curran	357
The IBM Enterprise System/9000 Type 9121 air-cooled processor	Hajek	307
<i>Computer organization and design</i>		
Clustering IBM Enterprise System/3090 computers for parallel execution of FORTRAN programs	Scarborough	667
Design choices for the TOP-1 multiprocessor workstation	Shimizu	591
Hierarchically interconnected multiprocessors	Franaszek	603
Operating system support for parallel programming on RP3	Bryant	617
The IBM Enterprise System/9000 Type 9121 air-cooled processor	Hajek	307
The IBM Victor V256 partitionable multiprocessor	Shea	573
The Parallel Processing Compute Server	Ammann	653
The RP3 program visualization environment	Kimelman	635
Two approaches to array fault tolerance in the IBM Enterprise System/9000 Type 9121 processor	Turgeon	382
<i>Computer performance analysis</i>		
A trace-driven study of CMS file references	Bozman	815
Design and performance of the IBM Enterprise System/9000 Type 9121 Vector Facility	Slegel	367
Enhanced self-test techniques for VLSI systems applied to the IBM Enterprise System/9000 Type 9121 processor	Sarma	390
Visualizing parallel execution of FORTRAN programs	Szelényi	270

<i>Computer-system availability</i>			Graphic workstations and supercomputers: An integrated environment for simulation of fluid dynamics problems		
Two approaches to array fault tolerance in the IBM Enterprise System/9000 Type 9121 processor	Turgeon	382	Piccolo	167	
<i>Data transmission</i>			<i>FORTRAN</i>		
Monitoring the performance of commercial T1-rate transmission service	Irvin	805	Clustering IBM Enterprise System/3090 computers for parallel execution of FORTRAN programs	Scarborough	667
<i>Design for testability</i>			The Parallel Processing Compute Server	Ammann	653
Enhanced self-test techniques for VLSI systems applied to the IBM Enterprise System/9000 Type 9121 processor	Sarma	390	<i>Fractals</i>		
<i>Display technology</i>			The art of fractal landscapes	Musgrave	535
Data visualization using a general-purpose renderer	Doi	45	<i>Graphics</i>		
Displaying morphological and lithological maps: A numerically intensive computing and visualization application	Barberi	78	Picturing randomness on a graphics supercomputer	Pickover	227
IDB: An image database system	Turtur	88	The art of fractal landscapes	Musgrave	535
Interactive analysis of the topology of 4D vector fields	Dickinson	59	The RP3 program visualization environment	Kimelman	635
Picture processing and three-dimensional visualization of data from scanning tunneling and atomic force microscopy	Stoll	67	<i>Image processing</i>		
Volume visualization of 3D finite element method results	Koyamada	12	A numerically intensive computing environment: IBM 3090 and the PS/2 Model 80	Arnold	140
<i>Electroerosion printing</i>			An interactive graphic tool to plot the structure of large sparse matrices	Paolini	231
Making negatives and plates for printing by electroerosion: Introduction and overview	Pennington	458	Animation of computer simulations of two-dimensional turbulence and three-dimensional flows	Briscolini	119
Making negatives and plates for printing by electroerosion: I. Physical principles	Cohen	466	Application of visualization tools in solid mechanics	Moini	156
Making negatives and plates for printing by electroerosion: II. Larger-scale fabrication and testing	Cohen	489	Correlative visualization techniques for multidimensional data	Treinish	184
Making negatives and plates for printing by electroerosion: III. Use of the direct negative and direct plate	Cohen	512	Data visualization using a general-purpose renderer	Doi	45
<i>Fault tolerance</i>			Displaying morphological and lithological maps: A numerically intensive computing and visualization application	Barberi	78
Two approaches to array fault tolerance in the IBM Enterprise System/9000 Type 9121 processor	Turgeon	382	FEMvis: An interactive visualization tool for mechanical analysis	Bala	4
<i>Field-effect transistors</i>			Graphic workstations and supercomputers: An integrated environment for simulation of fluid dynamics problems	Piccolo	167
Visual interpretation of multidimensional computations and transistor design	Farrell	26	IDB: An image database system	Turtur	88
<i>Finite element analysis</i>			Interactive analysis of the topology of 4D vector fields	Dickinson	59
FEMvis: An interactive visualization tool for mechanical analysis	Bala	4	Interactive Quantitative Visualization	Peskin	205
Volume visualization of 3D finite element method results	Koyamada	12	Picture processing and three-dimensional visualization of data from scanning tunneling and atomic force microscopy	Stoll	67
<i>Fluid dynamics</i>			Picturing randomness on a graphics supercomputer	Pickover	227
Animation of computer simulations of two-dimensional turbulence and three-dimensional flows	Briscolini	119	The art of fractal landscapes	Musgrave	535
			Three-dimensional visualization of many-body system dynamics	Bernaschi	254
			Visual interpretation of multidimensional computations and transistor design	Farrell	26
			Visualization in a VLSI design automation system	DeMaris	238
			Visualization of molecular dynamics via ray-tracing and animation in a vectorized environment	Williams	108
			Visualizing parallel execution of FORTRAN programs	Szelényi	270

Visualizing processes in neural networks	Wejchert	244	An interactive graphic tool to plot the structure of large sparse matrices	Paolini	231
Visualizing structure in high-dimensional multivariate data	Young	97	Animation of computer simulations of two-dimensional turbulence and three-dimensional flows	Briscolini	119
Volume visualization of 3D finite element method results	Koyamada	12	Application of visualization tools in solid mechanics	Moini	156
<i>Imaging</i>			Correlative visualization techniques for multidimensional data	Treinish	184
A 3072 × 32-stage TDI imaging device	Schlig	283	Data visualization using a general-purpose renderer	Doi	45
<i>Integrated circuit design</i>			Displaying morphological and lithological maps: A numerically intensive computing and visualization application	Barberi	78
A 128Kb CMOS static random-access memory	Chu	321	FEMvis: An interactive visualization tool for mechanical analysis	Bala	4
Visualization in a VLSI design automation system	DeMaris	238	Further results using the overhead model for parallel systems	Flatt	721
Waveform-relaxation-based circuit simulation on the Victor V256 parallel processor	Johnson	707	Graphic workstations and supercomputers: An integrated environment for simulation of fluid dynamics problems	Piccolo	167
<i>Logic</i>			Hierarchically interconnected multiprocessors	Franszek	603
An adder design optimized for DCS logic	Weinberger	352	IDB: An image database system	Turtur	88
Differential current switch—High performance at low power	Eichelberger	313	Interactive analysis of the topology of 4D vector fields	Dickinson	59
<i>Manufacturing</i>			Interactive Quantitative Visualization	Peskin	205
A 128Kb CMOS static random-access memory	Chu	321	Picture processing and three-dimensional visualization of data from scanning tunneling and atomic force microscopy	Stoll	67
<i>Mathematical functions and techniques</i>			Picturing randomness on a graphics supercomputer	Pickover	227
Interactive analysis of the topology of 4D vector fields	Dickinson	59	The art of fractal landscapes	Musgrave	535
Multiplication of a symmetric banded matrix by a vector on a vector multiprocessor computer	Reuter	697	Three-dimensional visualization of many-body system dynamics	Bernaschi	254
<i>Mechanical design</i>			Traffic studies of unbuffered Delta networks	Heidelberger	288
FEMvis: An interactive visualization tool for mechanical analysis	Bala	4	Visual interpretation of multidimensional computations and transistor design	Farrell	26
IBM System/390 air-cooled alumina thermal conduction module	Knickerbocker	330	Visualization in a VLSI design automation system	DeMaris	238
Three-dimensional visualization of many-body system dynamics	Bernaschi	254	Visualization of molecular dynamics via ray-tracing and animation in a vectorized environment	Williams	108
Volume visualization of 3D finite element method results	Koyamada	12	Visualizing parallel execution of FORTRAN programs	Szelényi	270
<i>Metal films</i>			Visualizing processes in neural networks	Wejchert	244
Making negatives and plates for printing by electroerosion: Introduction and overview	Pennington	458	Visualizing structure in high-dimensional multivariate data	Young	97
Making negatives and plates for printing by electroerosion: I. Physical principles	Cohen	466	Volume visualization of 3D finite element method results	Koyamada	12
Making negatives and plates for printing by electroerosion: II. Larger-scale fabrication and testing	Cohen	489	<i>Multilevel interconnections</i>		
Making negatives and plates for printing by electroerosion: III. Use of the direct negative and direct plate	Cohen	512	IBM Enterprise System/9000 Type 9121 Model 320 air-cooled processor technology	Gani	342
Multiplication of a symmetric banded matrix by a vector on a vector multiprocessor computer	Reuter	697	<i>Multiprocessors</i>		
<i>Models and modeling</i>			Automatic partitioning of a program dependence graph into parallel tasks	Sarkar	779
A numerically intensive computing environment: IBM 3090 and the PS/2 Model 80	Arnold	140	Clustering IBM Enterprise System/3090 computers for parallel execution of FORTRAN programs	Scarborough	667
			Design choices for the TOP-1 multiprocessor workstation	Shimizu	591

Execution of automatically parallelized APL programs on RP3	Ching	767	Hierarchically interconnected multiprocessors	Franaszek	603
Exploring database parallelism in a message-passing multiprocessor	Lorie	681	Low-overhead scheduling of nested parallelism	Hummel	743
Further results using the overhead model for parallel systems	Flatt	721	Multiplication of a symmetric banded matrix by a vector on a vector multiprocessor computer	Reuter	697
Hierarchically interconnected multiprocessors	Franaszek	603	Operating system support for parallel programming on RP3	Bryant	617
Low-overhead scheduling of nested parallelism	Hummel	743	The IBM Victor V256 partitionable multiprocessor	Shea	573
Multiplication of a symmetric banded matrix by a vector on a vector multiprocessor computer	Reuter	697	The parallel C (pC) programming language	Canetti	727
Operating system support for parallel programming on RP3	Bryant	617	The Parallel Processing Compute Server	Ammann	653
The IBM Victor V256 partitionable multiprocessor	Shea	573	The RP3 program visualization environment	Kimelman	635
The parallel C (pC) programming language	Canetti	727	Waveform-relaxation-based circuit simulation on the Victor V256 parallel processor	Johnson	707
The Parallel Processing Compute Server	Ammann	653			
The RP3 program visualization environment	Kimelman	635			
Waveform-relaxation-based circuit simulation on the Victor V256 parallel processor	Johnson	707			
<i>Networks</i>			<i>Performance measurement and prediction</i>		
Hierarchically interconnected multiprocessors	Franaszek	603	A trace-driven study of CMS file references	Bozman	815
Traffic studies of unbuffered Delta networks	Heidelberger	288	Design and performance of the IBM Enterprise System/9000 Type 9121 Vector Facility	Slegel	367
			Further results using the overhead model for parallel systems	Flatt	721
			Hierarchically interconnected multiprocessors	Franaszek	603
			Low-overhead scheduling of nested parallelism	Hummel	743
			The IBM Victor V256 partitionable multiprocessor	Shea	573
			Traffic studies of unbuffered Delta networks	Heidelberger	288
<i>Operating systems</i>			<i>Printing technology</i>		
Clustering IBM Enterprise System/3090 computers for parallel execution of FORTRAN programs	Scarborough	667	Making negatives and plates for printing by electroerosion: Introduction and overview	Pennington	458
Design choices for the TOP-1 multiprocessor workstation	Shimizu	591	Making negatives and plates for printing by electroerosion: I. Physical principles	Cohen	466
Low-overhead scheduling of nested parallelism	Hummel	743	Making negatives and plates for printing by electroerosion: II. Larger-scale fabrication and testing	Cohen	489
Operating system support for parallel programming on RP3	Bryant	617	Making negatives and plates for printing by electroerosion: III. Use of the direct negative and direct plate	Cohen	512
The Parallel Processing Compute Server	Ammann	653			
<i>Packaging</i>			<i>Program visualization</i>		
IBM Enterprise System/9000 Type 9121 Model 320 air-cooled processor technology	Gani	342	The RP3 program visualization environment	Kimelman	635
IBM System/390 air-cooled alumina thermal conduction module	Knickerbocker	330			
<i>Parallel processing</i>			<i>Programming languages</i>		
Automatic partitioning of a program dependence graph into parallel tasks	Sarkar	779	Execution of automatically parallelized APL programs on RP3	Ching	767
Clustering IBM Enterprise System/3090 computers for parallel execution of FORTRAN programs	Scarborough	667	Low-overhead scheduling of nested parallelism	Hummel	743
Design and performance of the IBM Enterprise System/9000 Type 9121 Vector Facility	Slegel	367	The parallel C (pC) programming language	Canetti	727
Design choices for the TOP-1 multiprocessor workstation	Shimizu	591			
Execution of automatically parallelized APL programs on RP3	Ching	767	<i>Relational databases</i>		
Exploring database parallelism in a message-passing multiprocessor	Lorie	681	Exploring database parallelism in a message-passing multiprocessor	Lorie	681
Further results using the overhead model for parallel systems	Flatt	721	<i>Semiconductor devices</i>		
			Visual interpretation of multidimensional computations and transistor design	Farrell	26

Semiconductor technology

A 128Kb CMOS static random-access memory	Chu	321
A 3072 × 32-stage TDI imaging device	Schlig	283
An adder design optimized for DCS logic	Weinberger	352
Differential current switch—High performance at low power	Eichelberger	313
Visual interpretation of multidimensional computations and transistor design	Farrell	26
Visualization in a VLSI design automation system	DeMaris	238

Simulation

A numerically intensive computing environment: IBM 3090 and the PS/2 Model 80	Arnold	140
An interactive graphic tool to plot the structure of large sparse matrices	Paolini	231
Animation of computer simulations of two-dimensional turbulence and three-dimensional flows	Briscolini	119
Application of visualization tools in solid mechanics	Moini	156
Correlative visualization techniques for multidimensional data	Treinish	184
Data visualization using a general-purpose renderer	Doi	45
Displaying morphological and lithological maps: A numerically intensive computing and visualization application	Barberi	78
FEMvis: An interactive visualization tool for mechanical analysis	Bala	4
Graphic workstations and supercomputers: An integrated environment for simulation of fluid dynamics problems	Piccolo	167
IDB: An image database system	Turtur	88
Interactive analysis of the topology of 4D vector fields	Dickinson	59
Interactive Quantitative Visualization	Peskin	205
Picture processing and three-dimensional visualization of data from scanning tunneling and atomic force microscopy	Stoll	67
Picturing randomness on a graphics supercomputer	Pickover	227
The art of fractal landscapes	Musgrave	535
Three-dimensional visualization of many-body system dynamics	Bernaschi	254
Visual interpretation of multidimensional computations and transistor design	Farrell	26
Visualization in a VLSI design automation system	DeMaris	238
Visualization of molecular dynamics via ray-tracing and animation in a vectorized environment	Williams	108
Visualizing parallel execution of FORTRAN programs	Szelényi	270
Visualizing processes in neural networks	Wejchert	244
Visualizing structure in high-dimensional multivariate data	Young	97
Volume visualization of 3D finite element method results	Koyamada	12

Solid modeling

Application of visualization tools in solid mechanics	Moini	156
Data visualization using a general-purpose renderer	Doi	45
FEMvis: An interactive visualization tool for mechanical analysis	Bala	4
Visual interpretation of multidimensional computations and transistor design	Farrell	26
Volume visualization of 3D finite element method results	Koyamada	12

Systems architecture and development

Design and performance of the IBM Enterprise System/9000 Type 9121 Vector Facility	Slegel	367
IBM Enterprise System/9000 Type 9121 system controller and memory subsystem design	Curran	357
The IBM Enterprise System/9000 Type 9121 air-cooled processor	Hajek	307

Vector computers

Multiplication of a symmetric banded matrix by a vector on a vector multiprocessor computer	Reuter	697
---	--------	-----

VLSI

A 128Kb CMOS static random-access memory	Chu	321
IBM Enterprise System/9000 Type 9121 Model 320 air-cooled processor technology	Gani	342
Visualization in a VLSI design automation system	DeMaris	238
Waveform-relaxation-based circuit simulation on the Victor V256 parallel processor	Johnson	707